Listing of Claims

1. (Original)   A method for the formation of a selective rendering of body structures of an object to be examined from a primary image data set, which method comprises the steps of:

  - combining a plurality of pixels so as to form at least one pixel group (BG1-BG16) which comprises each time pixels which are associated with the pixel group in conformity with predetermined filter criteria,

  - forming at least one pixel list by selection and/or deselection of at least one pixel group,

  - forming a filtered secondary image data set in which the pixels of the pixel groups of the at least one pixel list formed are marked, and

  - forming the rendering from the secondary image data set, the marked pixels being rendered separately, notably in highlighted or suppressed form.

2. (Currently Amended)   A method as claimed in claim 1, in which a plurality of image regions is defined, ~~characterized in that~~wherein the pixels overlap at least partly.

3. (Currently Amended)   A method as claimed in claim 1, in which a plurality of pixel groups is defined, ~~characterized in that~~wherein a combination data tree is formed by assigning each pixel group (BG1-BG16) to a node (D1-D10, C1-C11, B1, B2, A1), and that the nodes are logically assigned to one another in conformity with a predetermined combination criterion and the selection and deselection are performed by selection and/or deselection of the nodes.

4. (Currently Amended)   A method as claimed in claim 3, ~~characterized in that~~wherein the logic combination of two nodes takes place

  - if all pixels of the pixel group associated with one node are also contained in the pixel group associated with the other node and/or

  - if the pixel groups associated with the two nodes are not situated more than a predetermined distance apart.

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5. (Currently Amended)   A method as claimed in claim 3, ~~characterized in that~~wherein the logic combination is performed by mutual combination of pixel groups in the form of a hierarchically structured combination tree, where
- each pixel group is assigned a node of a lower level (C1-C11),
- at least one higher level (B1, B2) is defined,
- nodes of a respective lower level are combined with a node of a hierarchically higher level
    - if all pixels of the pixel group associated with the lower node are also contained in the pixel group associated with the node of the higher level and/or
    - if the pixel groups associated with the nodes of the lower level are not situated more than a predetermined distance apart.

6. (Currently Amended)   A method as claimed in claim 5, ~~characterized in that~~ wherein the formation of the filtered secondary image data set is performed by selection and deselection of nodes of different levels.

7. (Currently Amended)   A method as claimed in claim 1, ~~characterized in that~~wherein the combination of the pixels in the at least one pixel group is performed by means of the watershed transformation which comprises the following steps:
- forming a gradient image data set in which each pixel is assigned a gradient image value which corresponds to the difference between the image value of this pixel in the primary image data set and the image value of the pixels surrounding this pixel, and
- defining the pixel group by defining a gradient image region of neighboring pixels which are separated from one another by a local maximum of the gradient image values.

8. (Currently Amended)   A method as claimed in claim 2 ~~or claim 7~~, ~~characterized in that~~ wherein there is formed a plurality of hierarchically structured combination data trees whose nodes are logically combined in conformity with at least one combination criterion, notably

- if all pixels of the pixel group associated with the lower node are also contained in the pixel group associated with the node of the higher level, and/or
- if the pixel groups associated with the two nodes are not situated more than a predetermined distance apart,

that the combination criteria of the combination trees differ in respect of at least one combination criterion, and

that the formation of the pixel list takes place by selection and deselection of nodes of at least one, but preferably several different levels in the combination trees.

9. (Original)   A device for the formation of a selective rendering of body structures from a primary image data set, which device comprises
- means for combining a plurality of pixels so as to form at least one pixel group which contains each time pixels assigned to the pixel group in conformity with predetermined filter criteria,
- means for forming at least one pixel list by selection and deselection of each time all pixels of at least one pixel group,
- means for forming a filtered secondary image data set by marking the pixels of the at least one pixel list,
- means for forming the rendering from the secondary image data set, the marked pixels being rendered separately, notably in highlighted or suppressed form.

10. (Original)   A computer program for the formation of a selective rendering of body structures from a primary image data set, which computer program comprises program means which execute the steps of the method disclosed in claim 1 when the program is run on a computer.